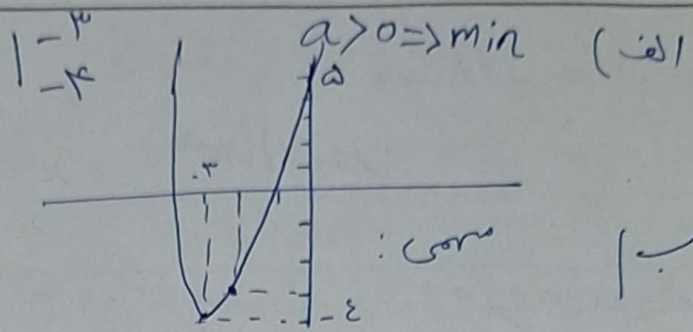


الف) $a = 1$
 $a = 0$
 $a < 0$
 $a > 0$

ب) $\Delta = 0$ $9 - 1a = 0$
 $a = \frac{9}{1}$

ج) $9 - 1a < 0$
 $-1a < -9$
 $a > \frac{9}{1}$

د) $9 - 1a > 0$
 $9 > 1a$
 $a < \frac{9}{1}$

$x^2 - 2x - 1 = 0 \Rightarrow (x-1)^2$ $x^2 - 2x - 1 + 2 = 0 + 2$

$(x-1)^2 = 2$ $x-1 = \pm\sqrt{2}$ $x = \sqrt{2} + 1$

$x = 1 - \sqrt{2}$

$x^2 - x - 1 = 0 \rightarrow x^2 - x = 1 \rightarrow x^2 - x + \frac{1}{4} = 1 + \frac{1}{4}$

$x = \frac{1 + \sqrt{5}}{2}$

$x = \frac{1 - \sqrt{5}}{2}$

$(x - \frac{1}{2})^2 = \frac{5}{4}$ $x - \frac{1}{2} = \pm\sqrt{\frac{5}{4}}$

$Obx^2 - Bx - C = 0$ $\Delta = b^2 - 4ac \rightarrow (-2)^2 - 4(1)(-1) = 4 + 4 = 8$

$x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} = 1 \pm \sqrt{2}$

$x^2 + 8x - 1 = 0$

$\Delta = 1 + 16 = 17$

$x = \frac{-1 \pm \sqrt{17}}{2}$

$$x^2 - 11x + 28 = 0$$

$$(x-4)(x-7)$$

$$x=4$$

$$x=7$$

$$x^2 + 3x - 28 = 0$$

$$(x+7)(x-4)$$

$$x = -7$$

$$x = 4$$

$$\omega x^2 - 12x + V = 0 \rightarrow x^2 - 12x + 3\omega = 0$$

$$(x-3)(x-\omega)$$

$$x = \frac{V}{\omega}$$

$$x = \frac{\omega}{\omega} = 1$$

$$3x^2 - 10x + V = 0 \rightarrow x^2 - 10x + 21 = 0$$

$$(x-3)(x-7)$$

$$x = \frac{10}{3} = 1$$

$$x = \frac{V}{10}$$

$$2x^2 - 2x + 3 = 0 \quad x^2 - \omega x + 2 = 0 \quad (x-3)(x-2) \quad x = \frac{3}{2} \quad x = \frac{2}{2}$$

$$2x^2 + 2x + 3 = 0 \quad x^2 + \omega x + 2 = 0 \quad (x+3)(x+2) \quad x = -\frac{3}{2} \quad x = -\frac{2}{2}$$

$$2x^2 - \omega x + 1 = 0 \quad \Delta = \omega^2 - 4 = 17 \quad x = \frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow \frac{\omega \pm \sqrt{17}}{4}$$

$$4x^2 + 7x + 9 = 0 \quad \Delta = 49 - 144 = -95 \quad \text{معادله جواب ندارد.}$$

$$S = \frac{3\sqrt{17}}{2} + \frac{3 + \sqrt{17}}{2} = \frac{4}{2} = 2 \quad \frac{3 - \sqrt{17}}{2} \quad \frac{3 + \sqrt{17}}{2}$$

$$\text{الف) } S - 2P = 3^2 - 2(-2) = 9 + 4 = 13 \quad P = \frac{3 - \sqrt{17}}{2} \times \frac{3 + \sqrt{17}}{2} = \frac{-1}{2} = -\frac{1}{2}$$

$$\text{ب) } S - 3SP = 2V + 18 = 4\omega$$

$$\binom{V}{\omega} + \binom{9}{2} = \frac{V!}{\omega! \times 2!} + \frac{9!}{2! \times 7!} = \frac{V \times 4}{2} + \frac{9 \times 8}{2} = 21 + 36 = 57$$

$$\binom{9}{3} - \binom{1}{2} = \frac{9!}{3! \times 6!} - \frac{1!}{2! \times 1!} = \frac{9 \times 8 \times 7}{6} - \frac{1 \times 1}{2} = 84 - 0.5 = 83.5$$